

CLAIMS

1. An abrasive composition for the integrated circuit electronics industry, characterized in that it comprises an aqueous acid suspension of individualised colloidal silica particles not linked to each other by siloxane bonds and a surfactant.
2. An abrasive composition according to claim 1, characterized in that the pH of said composition is comprised between 1 and 5.
3. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 2~~, characterized in that the pH of said composition is comprised between 2 and 3.
4. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 3~~, characterized in that the average diameter of the abrasive particles of said composition is comprised between 12 nm and 100 nm.
5. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 4~~, characterized in that the average diameter of abrasive particles of said composition is comprised between 35 nm and 50 nm.
6. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 5~~, characterized in that the concentration by weight in abrasive particles of said composition is comprised between 5% and 50%.
7. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 6~~, characterized in that the concentration by weight in abrasive particles of said composition is comprised between 25 and 35%.
8. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 7~~, characterized in that the volumic concentration of the surfactant of said composition is comprised between 0.001% and 5%.
9. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 8~~, characterized in that the volumic concentration of the surfactant of said composition is comprised between 0.01% and 1%.
10. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 9~~, characterized in that the surfactant of said composition is of anionic or non-ionic

type.

11. An abrasive composition according to ^{claim 1} ~~one of claims 1 to 10~~, characterized in that the surfactant of said composition is of anionic type.

12. An abrasive for mechanical chemical polishing in the integrated circuits industry, characterized in that it comprises a fabric impregnated with an aqueous acid suspension of colloidal silica of pH comprised between 1 and 5 containing individualized particles not linked to each other by siloxane bonds of diameter comprised between 12 and 100 nm and a surfactant.

13. A process for mechanical chemical polishing in the integrated circuits industry in which a layer of silicon oxide is rubbed using a support impregnated with an abrasive composition, characterized in that the abrasive composition comprises an aqueous acid suspension of individualized colloidal silica particles not linked to each other by siloxane bonds and a surfactant.

14. A process for mechanical chemical polishing in the integrated circuits industry in which a layer of silicon nitride is rubbed using a support impregnated with an abrasive composition, characterized in that the abrasive composition comprises an aqueous acid suspension of individualized colloidal silica particles not linked to each other by siloxane bonds and a surfactant.

15. A process for mechanical chemical polishing in the integrated circuits industry in which a selective mechanical chemical polishing of a silicon oxide layer and of another silicon nitride layer is carried out, characterized in that the abrasive composition comprises an aqueous acid suspension of individualized colloidal silica particles not linked to each other by siloxane bonds and a surfactant.

16. A process for mechanical chemical polishing in the integrated circuits industry in which a layer of polymers with a low dielectric constant is rubbed using a support impregnated by an abrasive composition, characterized in that the abrasive composition comprises an aqueous acid suspension of individualized colloidal silica particles not linked to each other by siloxane bonds and a surfactant.

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